IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT:	Chambard et al	)	
SERIAL NO.:	09/846,483	)	Examiner: E. McAvoy
FILED:	May 1, 2001	)	Art Unit: 1764
TITLED:	LUBRICATING OIL COMPOSITIONS	)	

Atty. Docket No. 2000M005

Assistant Commissioner for Patents
Washington, DC 20231

RESPONSE

Sir:

This paper is being filed in response to the Office Action mailed March 7, 2001. Reconsideration of the application is requested in view of the following remarks.

The present invention is directed to trunk piston marine engines lubricating oil compositions. More specifically, the invention is directed to the discovery that, when such lubricating oil compositions have a TBN of 25 or more and contain an aromatic carboxylate-based detergent (e.g., a salicylate) as the sole overbased detergent, the compositions can provide excellent piston deposit control, and maintain asphaltenes in suspension within the lubricating oil after use, in the absence of dispersant. The data of the specification, set forth beginning at page 12, compares the dispersant-free, overbased metal salicylate detergent-containing lubricating oil compositions of the present invention to lubricating oil compositions of the prior art. The tested prior art lubricating oil compositions include both dispersant containing- and dispersant free-lubricating oil compositions formulated with metal phenate and metal sulfonate overbased detergents, and combinations of salicylate, phenate and sulfonate detergents. The data clearly demonstrate the improved piston deposit control achieved in trunk piston marine engines using the lubricating oil compositions of the present invention, as compared to the lubricating oil compositions of the prior art.

Claims 1 through 8 and 10 through 17, all the claims remaining in the application, stand rejected under 35 USC Section 103(a) as being unpatentable over any one of U.S. Patent No. 4,283,294 to Clarke (hereinafter referred to as "the Clarke patent"); U.S. Patent No. 3,625,893 to Brook et al. (hereinafter referred to as "the Brook et al. patent"); and U.S. Patent No. 6,114,288 to Fujitsu et al. (hereinafter referred to as "the Fujitsu et al. patent"). Applicants respectfully traverse these grounds for rejection.

The Clarke patent is directed to a lubricating oil composition for crosshead marine diesel engines, which composition comprises at least two overbased detergents, each based on a different metal, and an antioxidant; there being a given ratio between the total weight of detergent and antioxidant. While the Clarke patent allows for the use of salicylate detergents, it does not differentiate between the use of salicylate detergents and, for example, phenate and sulfonate detergents. Thus, one of ordinary skill in the art would not be led by the disclosure of the Clarke patent expect that any improved performance would result from the use of a salicylate as the sole overbased detergent. Further, although the selection of dispersant is not a feature of the invention of the Clarke patent and thus, is not claimed, there is nothing in the Clarke patent that would lead one to exclude a dispersant and expect that piston cleanliness and dispersing properties could be maintained. Dispersants are conventionally added to crosshead marine diesel lubricating oil compositions and absent an express teaching to the contrary, lubricants described in patent specifications should be assumed to contain a dispersant. The Clarke patent describes dispersants suitable for use in the lubricating oil compositions described therein in column 4 of the patent.

The claims of the present application require that the compositions of the invention be dispersant free and contain, as the sole overbased detergent, a metal aromatic carboxylate detergent. The Clarke patent teaches nothing that would lead one of ordinary skill to select a salicylate detergent over, for example, a phenate or sulfonate detergent, or a mixture of a salicylate and one or more of a phenate or sulfonate detergent. The Clarke patent includes no disclosure that would lead one of ordinary skill to expect that by selecting a certain detergent and maintaining a minimum compositional TBN, the use of a dispersant-free formulation with improved performance could be provided. Thus, the Clarke patent fails to render obvious the present invention under Section 103.

The Brook et al. patent is quite old and predates the use of highly overbased detergents. The Brook et al. patent expressly teaches that lubricating oil compositions formed in accordance therewith will have a TBN of only 5 to at most 12. This is in contrast to the present invention which requires a minimum compositional TBN of 25. Further, the Brook et al. patent is expressly directed to compositions containing, as detergent, a mixture of a metal salt of an aromatic carboxylic acid and a metal salt of naphthenic acids.

Therefore, even if one were to apply the teachings of the Brook et al. patent to more modern overbased detergent, one would not be led to use a metal salt of an aromatic carboxylic acid as the sole detergent. Further, applicants submit that the Brook et al. patent also fails to mention dispersant only because of the age of the reference. Performance requires in 1968 were not as stringent as they are today. To meet modern standards, dispersants are conventionally required.

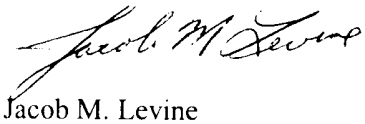
The Brook et al. patent fails to describe, and actually excludes lubricating oil compositions having a TBN of 25 or more. The Brook et al. patent fails to describe, and actually excludes a lubricating oil composition containing a metal salt of an aromatic carboxylic acid as the sole overbased detergent. Further, applicants submit that the Brook et al. patent fails to suggest that by adhering to the limitations of the present claims, a lubricant meeting modern performance standards could be provided in the absence of a dispersant. Thus, the Brook et al. patent fails to render obvious the present invention under Section 103.

The Fujitsu et al. patent is directed primarily to the selection of certain ZDDP antiwear agents in combination with salicylate detergents in compositions having a relatively high shear viscosity. The Fujitsu et al. patent sets forth that the combination of selected materials provides advantages (other than reduced piston deposits) in conventional-type lubricating oil compositions. Applicants submit that, absent an express teaching to the contrary, such compositions should be assumed to contain dispersants. This position is wholly supported by the disclosure of the Fujitsu et al. patent, which demonstates the results of the invention claimed therein in "test oils [that were] based on the additive compositions for standard engine oil. Specifically, metallic detergents, wear resistance agents, ash free dispersants, pour point depressants and foaming agents were combined, and these had API SG grade properties (see col. 5, lines 39 to 44 (emphasis added)).

The Fujitsu et al. patent, which is not directed to lubricating oil compositions specifically formulated for trunk piston marine engines, fails to suggest that by selecting a specific detergent, and maintaining a specified TBN level, a composition meeting required performance standards can be formulated in the absence of dispersant. There is nothing in the Fujitsu et al. patent that would lead one to form a dispersant-free formulation. Therefore, the Fujitsu et al. patent fails to render obvious the present invention under Section 103.

For the reasons set forth above, applicants believe that the cited prior art references fail to fairly suggest the compositions now claimed. The unexpected properties of the claimed compositions are clearly established by the comparative data of the specification. Therefore, applicants submit that the present claims patentably distinguish over each of the cited prior art references and any combination thereof, and respectfully request that all rejections presented under Section 103 be withdrawn and the above-identified patent application now be passed to issue.

Respectfully submitted,



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